REMARKS

Claims 17, 51 and 57 have been amended.

Non-elected claims 1 - 16 and 24 - 50 have been canceled without prejudice or disclaimer of the subject matter thereof. Applicants reserve the right to pursue the subject matter of these claims in continuing and/or divisional applications.

Claims 17 - 23 and 51 - 62 are present in the subject application.

In the Office Action dated May 18, 2005, the Examiner has requested insertion of a serial number for a referenced U.S. patent application, has rejected claims 17 - 20, 23, 51 - 54 and 57 - 60 under 35 U.S.C. §102(b) and has rejected claims 21, 22, 55 and 61 under 35 U.S.C. 103(a). Applicants respectfully request reconsideration of the subject application based on the following remarks.

Initially, the Examiner has requested insertion of a serial number for a U.S. patent application mentioned in the specification. Accordingly, the specification has been amended to include the requested serial number. No new matter has been added.

The Examiner has rejected claims 17 - 20, 23, 51 - 54 and 57 - 60 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,293,868 (Gonzalez). Briefly, the present invention is directed toward a fluid cassette for an IV line temperature controlled warming device. The fluid cassette or cartridge receives fluid from an IV line and includes intravenous line tubing arranged in a preformed configuration. The configuration includes tubing sections arranged in adjacent portions and a central serpentine tubing section that basically reverses fluid flow and facilitates flow in opposing directions within the adjacent tubing sections.

The Examiner takes the position that the Gonzalez patent discloses the features within these claims.

This rejection is respectfully traversed. However, in order to expedite prosecution of the subject application, independent claims 17, 51 and 57 have been amended to recite a plurality of tubing sections that are arranged adjacent each other to directly transfer heat between the adjacent tubing sections to heat the fluid from the intravenous fluid line.

The Gonzalez patent does not disclose, teach or suggest these features. In contrast, the Gonzalez patent discloses a fluid cooling apparatus with tube guide fins that are made of heat conductive material (e.g., See Column 3, lines 3 – 5 and 55 - 58). Tubing is placed between the guide fins, where the guide fins transfer heat to and from the flexible tubing to heat or cool the fluid in the tubing (e.g., See Column 3, lines 21 – 28; Column 4, lines 70 – 75; and Column 5, lines 10 – 18). Since each tube section of the Gonzalez patent is completely separated from direct contact with adjacent tubing sections by the guide fins, the Gonzalez tube sections cannot directly transfer heat between adjacent tubing sections as recited in the independent claims. In fact, Fig. 7 of the Gonzalez patent clearly illustrates tubes completely enclosed by conductive material (e.g., See Column 3, lines 70 – 75).

Since the Gonzalez patent does not disclose, teach or suggest the features recited in independent claims 17, 51 and 57 as discussed above, these claims are considered to overcome the Gonzalez patent.

Claims 18 – 20, 23, 52 – 54, and 58 – 60 depend either directly or indirectly from independent claims 17, 51 or 57 and, therefore, include all the limitations of their parent claims. These claims are considered to overcome the Gonzalez patent for substantially the same reasons discussed above in relation to their parent claims and for further limitations recited in the dependent claims.

The Examiner has rejected claims 17, 19, 20 and 57 - 60 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,747,450 (Ikegame et al.). Briefly, the present invention is directed toward a fluid cassette for an IV line temperature controlled warming device as described above. The Examiner takes the position that the Ikegame et al. patent discloses the features within these claims.

This rejection is respectfully traversed since the Ikegame et al. patent does not disclose, teach or suggest inlet and outlet terminals securable to portions of the intravenous fluid line as recited in the claims. However, in order to expedite prosecution of the subject application, independent claims 17 and 57 have been amended to clarify this feature and recite the features of an inlet terminal to receive fluid into the cassette from the intravenous fluid line, an outlet terminal to release fluid from the cassette to the intravenous fluid line and the inlet and outlet terminals being configured for connection to portions of the intravenous fluid line.

The Ikegame et al. patent does not disclose, teach or suggest these features. In contrast, the Ikegame et al. patent discloses a heat sink for semiconductor elements including a pipe made of a heat conductive material, such as copper or aluminum. The pipe is bent at a middle portion thereof and wound such that forward and return passages for a liquid coolant are formed into a spiral (e.g., See Abstract and Column 3, lines 44 - 58). The heat sink is utilized to cool semiconductor elements, such as diodes (e.g., See Column 4, lines 15 - 18). Thus, the Ikegame et al. patent discloses a heat sink for semiconductor elements and does not disclose, teach or suggest a cassette structurally configured for intravenous fluid lines or, for that matter, inlet and outlet terminals for receiving fluid from and transferring fluid to an

intravenous fluid line and the terminals configured for connection to portions of an intravenous fluid line as recited in the independent claims.

Claims 19 - 20 and 58 – 60 depend either directly or indirectly from independent claims 17 or 57 and, therefore, include all the limitations of their parent claims. These claims are considered to overcome the Ikegame et al. patent for substantially the same reasons discussed above in relation to their parent claims and for further limitations recited in the dependent claims.

The Examiner has rejected claims 21, 22, 55 and 61 under 35 U.S.C. §103(a) as being unpatentable over the Gonzalez patent in view of U.S. Pat. No. 5,245,693 (Ford et al.). Briefly, the present invention is directed toward a fluid cassette for an IV line temperature controlled warming device as described above. The Examiner takes the position that the Gonzalez patent discloses the claimed invention except for a fitting receiving a temperature sensor to measure fluid temperature including a thermally conductive member disposed in the fitting. The Examiner further alleges that it would have been obvious to combine the teachings of the Gonzalez and Ford et al. patents to attain the claimed invention.

This rejection is respectfully traversed. Initially, claims 21, 22, 55 and 61 depend either directly or indirectly from independent claims 17, 51 or 57 and, therefore, include all the limitations of their parent claims. As discussed above, the Gonzalez patent does not disclose, teach or suggest a plurality of tubing sections arranged adjacent each other to directly transfer heat between the adjacent tubing sections to heat fluid from the intravenous fluid line. The Ford et al. patent does not compensate for the deficiencies of the Gonzalez patent and similarly does not disclose, teach or suggest these features. Rather, the Ford et al. patent discloses an apparatus for heating parenteral fluids including a disposable cassette with

a unitary member divided to form a serpentine flow path by a plurality of separators (e.g., See Abstract). Accordingly, claims 21, 22, 55 and 61 are considered to overcome the Gonzalez and Ford et al. patents.

In addition to the foregoing, there is no apparent motivation or suggestion to combine the teachings of the Gonzalez and Ford et al. patents. In particular, the Gonzalez patent is directed toward a fluid cooling apparatus with tube guide fins that are made of heat conductive material to thermally treat fluid in the tube as described above, while the Ford et al. patent is directed toward an apparatus for heating parenteral fluids including a disposable cassette with a unitary member divided to form a serpentine flow path by a plurality of separators as described above. Thus, the patents are directed toward diverging structures and applications, and there is no apparent reason, motivation or suggestion to combine their teachings absent prohibited hindsight derived from Applicants' own disclosure. Accordingly, the proposed combination of the Gonzalez and Ford et al. patents does not render the claimed invention obvious.

Although the Examiner indicated in the Office Action Summary that claims 56 and 62 have been rejected, these claims were inadvertently omitted by the Examiner from the rejections in the Office Action. However, claims 56 and 62 depend either directly or indirectly from independent claims 51 and 57 and are considered to overcome the rejections for substantially the same reasons discussed above in relation to their parent claims.

Since the Gonzalez, Ikegame et al. and Ford et al. patents do not disclose, teach or suggest, either alone or in combination, the features recited in the claims as discussed above, the subject application claims are considered to be in condition for allowance.

The application, having been shown to overcome issues raised in the Office Action, is considered to be in condition for allowance and a Notice of Allowance is earnestly solicited.

Respectfully submitted,

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